

Pollution Prevention **Progress Report**



US Department of Energy ■ March 2000

Beginning with this issue, the *Pollution Prevention Progress Report* will be published quarterly by fiscal year, instead of by calendar year as in previous issues. This change is being made to match the fiscal year format of the *Annual Report of Waste Generation and Pollution Progress 2000*.

Albuquerque Operations Office

Los Alamos National Laboratory

Electronic equipment was sorted, segregated, recycled, and reused. These activities reduced routine operations low-level mixed waste by approximately five cubic meters, for a reported cost savings/avoidance of \$345,000.

Pantex Plant

Nonhazardous State regulated class 1 industrial solid waste solvents used in the High Explosive Dissolution Process were recycled. This recycle/reuse activity reduced routine operations hazardous waste (for reporting purposes, State regulated industrial solid waste is classified as hazardous waste) by approximately 10 metric tons, for a reported cost savings/avoidance of \$31,587.

Sandia National Laboratories/New Mexico

A 1998 Return-on-Investment project (Concrete Crusher) successfully crushed concrete and asphalt material for reuse at the

Laboratory, eliminating the need to purchase new materials. This recycle/reuse activity reduced cleanup/stabilization sanitary waste by 5,895 metric tons, for a reported cost savings/avoidance of \$75,000.

Chicago Operations Office

Argonne National Laboratory-East

Sanitary sludge was shipped to DuPage County for recycling as a methane-generating fuel to generate electricity at DuPage's Woodridge-Green Valley Plant. This recycle/reuse activity reduced routine operations sanitary waste by approximately 27 metric tons, for a reported cost savings/avoidance of \$3,700.

Fermi National Accelerator Laboratory

An empty steel tank that was contaminated with depleted uranium was decontaminated so it could be sold as scrap metal. This segregation activity reduced cleanup/stabilization low-level mixed waste by approximately 43 cubic meters (the capacity of the tank), for a reported cost savings/avoidance of \$4,300.

Princeton Plasma Physics Laboratory

The Laboratory washed latex gloves used in the deactivation and decommissioning operation for reuse. This recycle/reuse activity reduced cleanup/stabilization low-level radioactive waste by approximately

three cubic meters, for a reported cost savings/avoidance of \$16,995.

Idaho Operations Office

Idaho National Engineering and Environmental Laboratory (INEEL)

Resource Conservation and Recovery Act (RCRA) regulated hazardous materials, including lead scrap, lead acid batteries, RCRA scrap, and silver scrap, were recycled. This recycle/reuse activity reduced routine operations hazardous waste by approximately 44 metric tons, for a reported cost savings/avoidance of \$866,000.

Nevada Operations Office

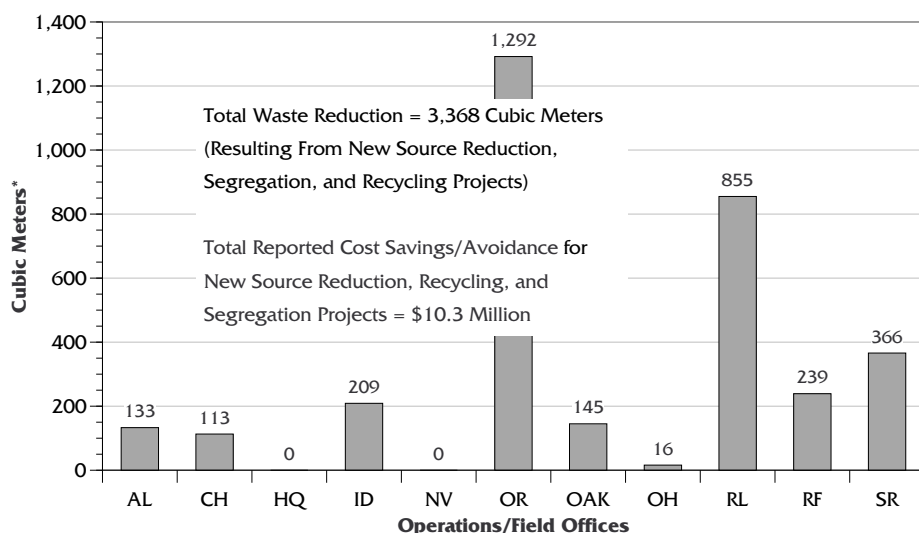
Nevada Test Site

Ferrous, nonferrous, and light steel scrap metals were sold for recycling. This recycle/reuse activity reduced cleanup/

P Quarterly Facts *For New Projects Oct. '99 – Dec. '99*

- 122 radioactive, mixed, and hazardous waste pollution prevention projects completed.
- 3,368 cubic meters of radioactive, mixed, and hazardous waste reduced.
- \$10.3 million reported cost savings/avoidance.

Radioactive, Mixed, and Hazardous Waste Reductions for New Projects for All Operations Offices (Routine Operations and Cleanup/Stabilization), October 1999 – December 1999



*Assuming one cubic meter is equivalent to one metric ton.

stabilization sanitary waste by approximately 45 metric tons, for a reported cost savings/avoidance of approximately \$1,653.

Oakland Operations Office

Energy Technology Engineering Center

Concrete blocks were transferred to a milling company for processing for reuse as road base material. This recycle/reuse activity reduced cleanup/stabilization sanitary waste by approximately 124 metric tons, for a reported cost savings/avoidance of \$20,000.

Lawrence Berkeley National Laboratory

Spray controller units were installed on Building 77 cleaning tanks, which reduced water and chemical usage, sludge generation, and operator time. This source reduction activity reduced routine operations hazardous waste by 0.5 metric tons, for a reported cost savings/avoidance of \$32,000.

Lawrence Livermore National Laboratory

Approximately 7,000 gallons of 94 percent ethanol were picked up by a commercial vendor (at the vendor's expense) for processing into fuel and industrial grade ethanol. The ethanol, previously used as laser dye solvent in the Atomic Vapor Laser Isotope Separation (AVLIS) program, became available when the

program was discontinued. This recycle/reuse activity reduced routine operations hazardous waste by approximately 27 metric tons, for a reported cost savings/avoidance of \$70,000.

Oak Ridge Operations Office

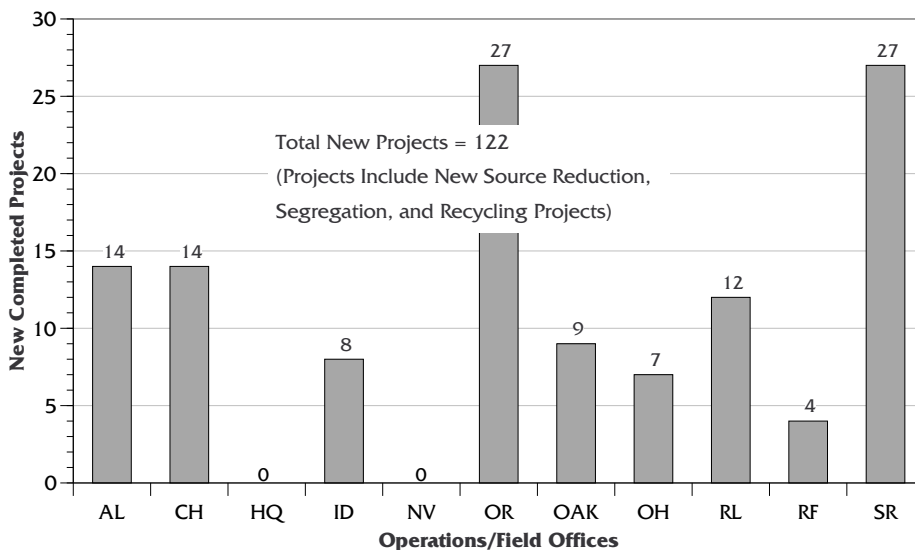
East Tennessee Technology Park

Lead acid batteries were collected from emergency light fixtures and from vehicles, and were sold to an offsite recycler. This recycle/reuse activity reduced routine operations low-level mixed waste by approximately five cubic meters, for a reported cost savings/avoidance of \$203,950.

Oak Ridge National Laboratory

Scrap metal, used oil, lead acid batteries, and coal ash were recycled. This recycle/reuse activity reduced routine operations sanitary waste by approximately 3,921 metric tons, for a reported cost savings/avoidance of \$50,000.

New Projects for Radioactive, Mixed, and Hazardous Wastes for All Operations Offices (Routine Operations and Cleanup/Stabilization), October 1999 – December 1999



Oak Ridge Y-12 Plant

Scrap metal was recycled. This recycle/reuse activity reduced routine operations sanitary waste by approximately 140 metric tons, for a reported cost savings/avoidance of \$191,617.

Ohio Field Office

Mound Plant

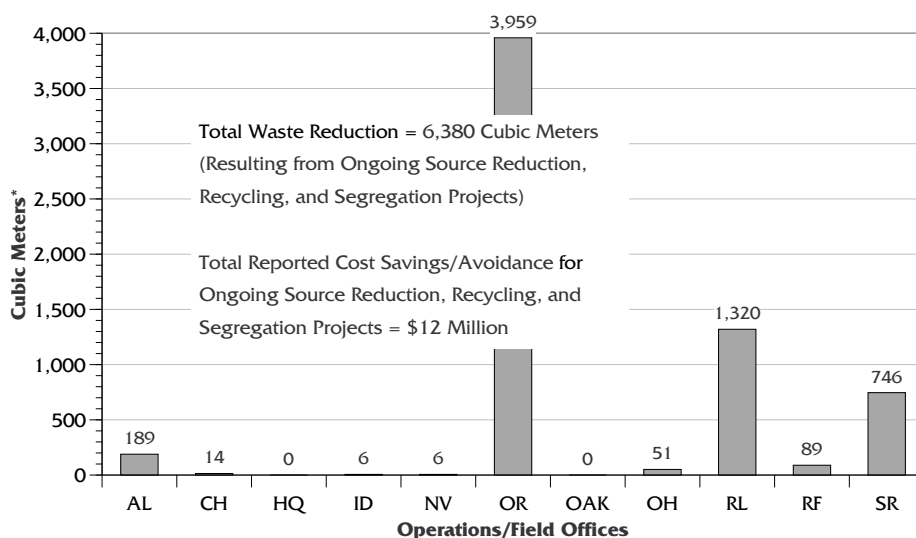
Metals from deactivation and decommissioning activities were recycled. This recycle/reuse activity reduced cleanup/stabilization sanitary waste by approximately 247 metric tons, for a reported cost savings/avoidance of \$7,600.

West Valley

Demonstration Project

Excess vitrification chemicals were returned to the manufacturer for recertification and reuse at the Hanford Site. This recycle/reuse activity reduced cleanup/stabilization sanitary waste generation by approximately 27 metric tons, for a reported cost savings/avoidance of \$230,000.

Radioactive, Mixed, and Hazardous Waste Reductions for Ongoing Projects for All Operations Offices (Routine Operations and Cleanup/Stabilization), October 1999 – December 1999



Richland Operations Office

Hanford Site

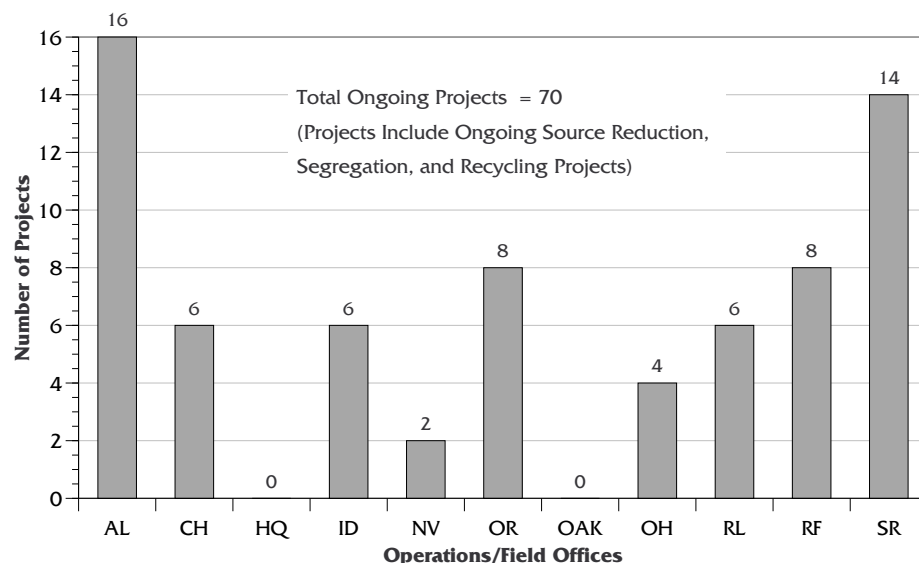
Five cranes were decontaminated for free-release and sold. This segregation activity reduced routine operations low-level radioactive waste by 815 cubic meters, for a reported

cost savings/avoidance of approximately \$2.3 million.

Pacific Northwest National Laboratory

Lead acid and gel cell batteries were shipped to the Centralized Consolidated Recycle center for recycling. This recycle/reuse activity reduced routine operations hazardous waste by approximately one metric ton, for a reported cost savings/avoidance of \$47,744.

Ongoing Projects for Radioactive, Mixed, and Hazardous Wastes for All Operations Offices (Routine Operations and Cleanup/Stabilization), October 1999 – December 1999



Rocky Flats Field Office

Rocky Flats Environmental Technology Site

Use of the Geoprobe instead of a hollow stem auger drill rig for drilling soil borings, collecting soil samples, installing wells, and taking groundwater samples reduced waste generation. By pushing through the soil, the Geoprobe avoids the drill-cutting waste that must be containerized, characterized, and disposed. This source reduction activity reduced

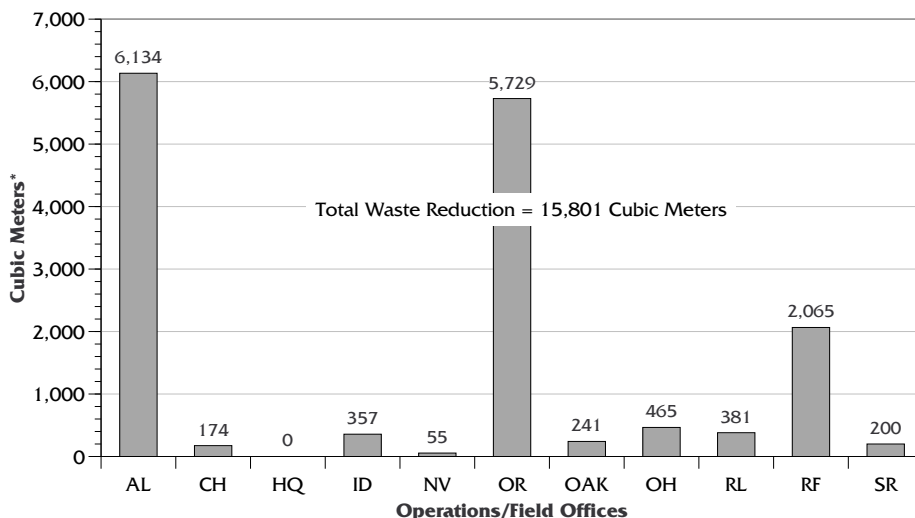
Pollution Prevention Recognition

The implementation of innovative technologies at the **Rocky Flats Environmental Technology Site** has reduced the amount of transuranic waste destined for disposal. The Pipe Overpack Container, Gas Generation Testing Canister, and Filtered Bag-Out Bag allow more radioactive material to be placed into each 55-gallon waste drum, while meeting all transportation and waste acceptance requirements. These three technologies have reduced waste management costs, and have reduced the amount of secondary waste destined for disposal at the Waste Isolation Pilot Plant by 1,002 cubic meters.

An energy consumption study was performed on two identical co-located buildings at the **Pacific Northwest National Laboratory**. By adjusting thermostat temperatures, recalibrating control software, and replacing equipment, energy use decreased 8,300 kilowatt-hours per day, for an estimated cost savings of \$90,000 annually.

Excess materials in controlled storage were listed on the **West Valley Demonstration Project's** Intranet Web site for reuse, for a reported cost savings/avoidance of \$8,486.

Cleanup/Stabilization Waste Reductions for All Operations Offices, October 1999 – December 1999



*Assuming one cubic meter is equivalent to one metric ton.

cleanup/stabilization low-level mixed waste by approximately six cubic meters, for a reported cost savings/avoidance of \$18,464.

Savannah River Operations Office Savannah River Site

A Glove Bag Program was implemented in the Nuclear Materials Stabilization & Storage Division to resolve safety and waste issues associated with the installation and removal of containment huts. The program scope included increasing worker productivity, promoting waste minimization, and decreasing the lifecycle cost of launderable personal protective equipment, decontamination materials, and equipment. Activities completed include heat sealing equipment setup, containment facility setup, establishment of storage inventory, hands-on training support and procedures, mock support, and promotion of site-wide standardization of containment use. This source reduction activity reduced routine

operations transuranic and low-level radioactive waste by approximately 29 cubic meters combined, for a total reported cost savings/avoidance of approximately \$1 million.

Hand tools and disassembly trollies at the Spent Fuels Storage Division were surveyed, decontaminated as required, and free-released for reuse, along with the B-12 containers that had been storing them. This segregation activity reduced routine operations low-level radioactive waste by approximately six cubic meters, for a reported cost savings/avoidance of \$114,560.

For more information, please contact Christina Houston, Albuquerque National Pollution Prevention Program, at 505-845-5483, or via e-mail at chouston@doeal.gov.

This Report is also available on the EM-22 Web site at <http://twilight.saic.com/WasteMin/quarter.htm>.

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